
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=5; day=12; hr=13; min=42; sec=10; ms=564;]

Validated By CRFValidator v 1.0.3

Application No: 10524399 Version No: 2.0

Input Set:

Output Set:

Started: 2008-04-29 14:00:13.603

Finished: 2008-04-29 14:00:15.035

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 432 ms

Total Warnings: 28

Total Errors: 0

No. of SeqIDs Defined: 38

Actual SeqID Count: 38

Error code		Error Descript	ion								
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(1)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(2)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(3)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(4)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(5)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(6)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(7)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(8)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(9)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(10)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(11)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(12)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(13)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(14)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(15)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(16)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(17)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(18)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(19)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)

Input Set:

Output Set:

Started: 2008-04-29 14:00:13.603

Finished: 2008-04-29 14:00:15.035

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 432 ms

Total Warnings: 28

Total Errors: 0

No. of SeqIDs Defined: 38

Actual SeqID Count: 38

Error code Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

<110>	Novartis AG Krause, Andreas Niese, Detlef Raulf, Friedrich Scherer, Andreas	
<120>	Diagnosis of chronic rejection	
<130>	4-32608A	
	10524399	
<141>	2005-02-11	
<150> I	PCT/EP03/09292	
<151>	2003-08-21	
<150>	US 60/405,225	
<151>	2002-08-22	
<160>	38	
<170>	PatentIn version 3.3	
<210>	1	
<211>	63	
<212>		
	Artificial	
<220>		
<223>	Primer sequence	
<400>	1	
ggccagt	tgaa ttgtaatacg actcactata gggaggcggt ttttttttt tttttttt	60
ttt		63
<210>	2	
<211>	20	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer sequence	
<400>	2	
ggcttt	gcat gcgctctatt	20
<210>	3	
<211>	19	
<212>	DNA	
<213>	Artificial	

<223>	Primer sequence	
<400>		
gctgcat	ctc cttgctcca	19
<210>	4	
<211>		
<212>		
	Artificial	
<220>		
<223>	Primer sequence	
<400>	4	
ccctct	agec tetececace tte	23
	5	
	19	
<212>		
<213>	Artificial	
<0.005		
<220>	Primer sequence	
\223/	Filmer sequence	
<400>	5	
		19
ggagee		
<210>	6	
<211>	19	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer sequence	
<400>	6	
aagcaag	gaag cagcagcca	19
<210>	7	
<211>	19	
<212>	DNA	
	Artificial	
<220>		
<223>	Primer sequence	
<400>	7	
tcgcgt	gttc cccaagcgc	19
0		
<210>	8	
<211>	21	
<212>	DNA	

<213>	Artificial	
<220>		
<223>	Primer sequence	
<400>		
tgggag	ttac ctgagggaag c	21
<210>		
<211>	18	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer sequence	
<400>	9	
gattgg	cagt gccccatg	18
<210>	10	
<211>	30	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer sequence	
	•	
<400>	10	
agaccc	ttta tgtctctcag gagccctgga	30
-		
<210>	11	
<211>	19	
<212>		
	Artificial	
<220>		
	Primer sequence	
	1	
<400>	11	
	aggg caggacact	19
5 5 5		
<210>	12	
<211>		
<212>		
	Artificial	
-219/		
<220>		
	Primer sequence	
-223/	111mer begaenee	
<400>	12	
	tcac taagggcagg tg	22
cuaaca	coac caagggcagg cg	~ ~

```
<210> 13
<211> 22
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 13
caggcactga gcaagcaggc cc
                                                                    22
<210> 14
<211> 19
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 14
                                                                    19
tggccttctc agtttgggc
<210> 15
<211> 21
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 15
                                                                    21
ttcagttatt ccgaacggga a
<210> 16
<211> 24
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 16
aaagggatgg aggctttacg gcca
                                                                    24
<210> 17
<211> 21
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
```

<400> 17

<210>	18	
<211>	21	
<212>		
<213>	Artificial	
<220>		
<223>	Primer sequence	
<400>	18	
tttgaa	itccc aggcaacttt g	
<210>	19	
<211>		
<212>		
	Artificial	
.210/		
<220>		
<223>	Primer sequence	
<400>	19	
tctcct	ggga cgagaaggac tcatcca	
<210>	20	
<211>	26	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Primer sequence	
. 100>	20	
<400>	20	
aacttg	gccaa ttctgtgaat gttatt	
<210>	21	
<211>	22	
<212>		
<213>	Artificial	
<220>		
<223>	Primer sequence	
< 40.05	0.1	
<400>	21	
yggaca	itgtt acccaatcac aa	
<210>	22	
<211>	33	
<212>		
<213>	Artificial	

21

ctgagccacc tttgctgtct t

```
<223> Primer sequence
<400> 22
atttaaaaag ctgggtctgt aatgggaggc att
                                                                    33
<210> 23
<211> 23
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 23
tggaaattct gctcacttct tgc
                                                                    23
<210> 24
<211> 22
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 24
                                                                    22
tctgatgtca tggccaaatt tg
<210> 25
<211> 22
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 25
                                                                    22
tctgatgtca tggccaaatt tg
<210> 26
<211> 24
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 26
gacactacta aagctcccag ctcc
                                                                    24
<210> 27
<211> 20
```

<212> DNA

```
<213> Artificial
<220>
<223> Primer sequence
<400> 27
                                                                      20
ttctggaatc agctgctgga
<210> 28
<211> 31
<212> DNA
<213> Artificial
<220>
<223> Primer sequence
<400> 28
ttcatgctcc atttttaacc acttgcctct t
                                                                      31
<210> 29
<211> 1709
<212> DNA
<213> homo sapiens
<400> 29
ggtacetect gecageacet ettgggtttg etgagaacte aegggeteea getacetgge
                                                                      60
catgaccacc acatttctgc aaacttcttc ctccaccttt gggggtggct caacccgagg
                                                                     120
gggttccctc ctggctgggg gaggtggctt tggtgggggg agtctctctg ggggaggtgg
                                                                     180
aagccgaagt atctcagctt cttctgctag gtttgtctct tcagggtcag gaggaggata
                                                                     240
tgggggtggc atgagggtct gtggctttgg tggaggggct ggtagtgttt tcggtggagg
ctttggaggg ggcgttggtg ggggttttgg tggtggcttt ggtggtggcg atggtggtct
                                                                     360
cctctctggc aatgagaaaa ttaccatgca gaacctcaat gaccgcctgg cctcctacct
                                                                     420
ggacaaggta cgtgccctgg aggaggccaa tgctgacctg gaggtgaaga tccatgactg
                                                                     480
                                                                     540
gtaccagaag cagaccccag ccagcccaga atgcgactac agccaatact tcaagaccat
tgaagagete egggacaaga teatggeeae eaceategae aacteeeggg teateetgga
                                                                     600
gatcgacaat gccaggctgg ctgcggacga cttcaggctc aagtatgaga atgagctggc
                                                                     660
                                                                     720
cctgcgccag ggcgttgagg ctgacatcaa cggcttgcgc cgagtcctgg atgagctgac
                                                                     780
cctggccagg actgacctgg agatgcagat cgagggcctg aatgaggagc tagcctacct
                                                                     840
gaagaagaac cacgaagagg agatgaagga gttcagcagc cagctggccg gccaggtcaa
                                                                     900
```

tgtggagatg gacgcagcac cgggtgtgga cctgacccgt gtgctggcag agatgaggga

gcagtacgag gccatggcgg	agaagaaccg	ccgggatgtc	gaggcctggt	tcttcagcaa	960
gactgaggag ctgaacaaag	aggtggcctc	caacacagaa	atgatccaga	ccagcaagac	1020
ggagatcaca gacctgagac	gcacgatgca	ggagctggag	atcgagctgc	agtcccagct	1080
cagcatgaaa gctgggctgg	agaactcact	ggccgagaca	gagtgccgct	atgccacgca	1140
gctgcagcag atccaggggc	tcattggtgg	cctggaggcc	cagctgagtg	agctccgatg	1200
cgagatggag gctcagaacc	aggagtacaa	gatgctgctt	gacataaaga	cacggctgga	1260
gcaggagatc gctacttacc	gcagcctgct	cgagggccag	gatgccaaga	tggctggcat	1320
tggcatcagg gaagcctctt	caggaggtgg	tggtagcagc	agcaatttcc	acatcaatgt	1380
agaagagtca gtggatggac	aggtggtttc	ttcccacaag	agagaaatct	aagtgtctat	1440
tgcaggagaa acgtcccttg	ccactcccca	ctctcatcag	gccaagtgga	ggactggcca	1500
gagggcctgc acatgcaaac	tccagtccct	gccttcagag	agctgaaaag	ggtccctcgg	1560
tcttttattt cagggctttg	catgcgctct	attccccctc	tgcctctccc	caccttcttt	1620
ggagcaagga gatgcagctg	tattgtgtaa	caagctcatt	tgtacagtgt	ctgttcatgt	1680
aataaagaat tacttttcct	tttgcaaat				1709

<210> 30

<211> 1359

<212> DNA

<213> homo sapiens

<400> 30

ctttttggtg taaatctgga ctctaattct gtaatatatc aaggaatctc gtaaaaccga cactaaaacg tccctgccta caaatcatcc ggccaaatta tgagttcatt gtattatgcg 120 aatgctttat tttctaaata tccagcctca agttcggttt tcgctaccgg agccttccca 180 gaacaaactt cttgtgcgtt tgcttccaac ccccagcgcc cgggctatgg agcgggttcg 240 300 ggcgcttcct tcgccggctc gatgcagggc ttgtaccccg gcgggggggg catggcgggc cagagegegg ceggegteta egeggeegge tatgggeteg ageegagtte etteaacatg 360 cactgegege cetttgagea gaacetetee ggggtgtgte eeggegaete egecaaggeg 420 480 gegggegeea aggageagag ggaeteggae ttggeggeeg agagtaaett eeggatetae 540 ccctcgatgc gaagctcagg aactgaccgc aaacgaggcc gccagaccta cacccgctac cagaccctgg agctggagaa ggaatttcac tacaatcgct acctgacgcg gcggcggcgc 600 660 atcgagatcg cgcacgcgct ctgcctcacg gaaagacaga tcaagatttg gtttcagaac

cggcgcatga	agtggaaaaa	ggagaacaag	accgcgggcc	cggggaccac	cggccaagac	720
agggctgaag	cagaggagga	agaggaagag	tgagggatgg	agaaagggca	gaggaagaga	780
catgagaaag	ggagacgaag	agaagcccag	ctctgggaac	tgaatcagga	aactcaaatc	840
gaatagggaa	gtaaaaaaac	aaaacaaaaa	acaaaaaaaa	acaaaaaaaa	accctattta	900
aatgaaagga	gtttaaaaac	attttttaag	gagggagaaa	ggagaaattt	tggtttttca	960
acactgaaaa	aatagtacct	ataggaaagt	ctgtcaggtt	tggtttttt	gtacaatatg	1020
aaaaggacat	tatctacctg	ttctgtagct	ttctggaatt	tacctcccct	tttctatgtt	1080
gctattgtaa	ggtctttgta	aaatcttgca	gttttgtaag	ccctctttaa	tgctgtcttt	1140
gtggactgtg	ggtctggact	aaccctgtgg	ttgcctgccc	tcctgtgcct	cegeetteee	1200
agcagcggca	ccaaggggcc	ttagggagcc	ccaaaaccta	ccactcgcgt	gttccccaag	1260
cgccttgctg	ctgctgcttg	cttcccgtcc	cccagcccca	tgctcccttt	acattctgtg	1320
tgtatctaaa	ggatggaaaa	ataaaacgca	attaaaaat			1359

<210> 31

<211> 1370

<212> DNA

<213> homo sapiens

<400> 31

gacgcctctg cgcgaggaac gaggagctac gggcctgggc ccggttattg ccatgggcag eggetgeege ategaatgea tattetteag egagtteeae eccaegetgg gacceaagat 120 cacctatcag gtccctgaag acttcatctc ccgagagctg tttgacacag tccaagtgta 180 catcatcacc aagccagagc tgcagaacaa gcttatcact gtctagagag cagcttcgtg 240 tccatggagg agagcaagca gaagttggtg cccatcatga ccatcttgct ggaggagcta 300 aatgcctcag gccggtgcac tctgcccatt gatgagtcca acaccatcca cttgaaggtg 360 attgagcagc ggccagaccc tccggtggcc caggagtatg atgtacctgt ctttaccaaa 420 gacaaggagg atttcttcaa ctcacagtgg gacctcacta cacaacaaat cctgccctac 480 attgatgggt tccgccacat ccagaagatt tcagcagagg cagatgtgga gctcaacctg 540 600 gtgcgcattg ctatccagaa cctgctgtac tacggcgttg tgacactggt gtccatcctc 660 cagtactcca atgtatactg cccaacgccc aaggtccagg acctggtaga tgacaagtcc 720 ctgcaagagg catgtctatc ctacgtgacc aagcaagggc acaagagggc cagtctccgg 780 gatgtgttcc agctatactg cagcctgagc cctggcacta ccgtgcgaga cctcattggc

cgccaccccc	agcagctgca	gcatgttgat	gaacggtcag	aggagaattt	gctggggcat	840
ttgggagtta	cctgagggaa	gctagaccct	ttatgtctct	caggagccct	ggatcatggg	900
gcactgccaa	tccaagcagg	cttcctggag	atgatgggct	acagagacaa	aattgaaggg	960
agactacagg	aaagggttgg	cctgcctgaa	agaaggcctg	gccagggcgt	caccccgtcc	1020
tctgatcctc	accctaggaa	gctgatccag	ttcgggctta	tgaagaacct	catcaggcga	1080
ctacagaagt	atcctgtgcg	ggtgactcgg	gaagagcaga	gccaccctgc	ccggctttat	1140
acaggctgcc	acagctatga	cgagatctgc	tgcaagacag	gcatgagcta	ccatgagctg	1200
gatgagcggc	ttgaaaatga	ccccaacatc	atcatctgct	ggaagtgagg	ctggtagtga	1260
ctggatggac	acattgctgt	gggtagtccc	tcctactagg	aggcttgtca	tactgtctag	1320
aggttgactc	ttagttctgt	aaataaagac	atccatttca	aacaaaaaa		1370

<210> 32

<211> 2736

<212> DNA

<213> homo sapiens

<400> 32

ttgcactctc ccacaccctt ttcttttcgt ccgctcttcg cttatttctc ccgccgtctc ctctgcataa gaaggggaac gaaagatggc ggcggaaacg ctgctgtcca gtttgttagg 120 actgctgctt ctgggactcc tgttacccgc aagtctgacc ggcggtgtcg ggagcctgaa 180 240 cctggaggag ctgagtgaga tgcgttatgg gatcgagatc ctgccgttgc ctgtcatggg agggcagagc caatcttcgg acgtggtgat tgtctcctct aagtacaaac agcgctatga 300 360 gtgtcgcctg ccagctggag ctattcactt ccagcgtgaa agggaggagg aaacacctgc ttaccaaggg cctgggatcc ctgagttgtt gagcccaatg agagatgctc cctgcttgct 420 gaagacaaag gactggtgga catatgaatt ctgttatgga cgccacatcc agcaatacca 480 catggaagat tcagagatca aaggtgaagt cctctatctc ggctactacc aatcagcctt 540 cgactgggat gatgaaacag ccaaggcctc caagcagcat cgtcttaaac gctaccacag 600 ccagacctat ggcaatgggt ccaagtgcga ccttaatggg aggcccgggg aggccgaggt 660 teggtteete tgtgaegagg gtgeaggtat etetggggae taeategate gegtggaega 720 780 gcccttgtcc tgctcttatg tgctgaccat tcgcactcct cggctctgcc cccaccctct cctccggccc ccacccagtg ctgcaccaca ggccatcctc tgtcaccctt ccctacagcc 840 900 tgaggagtac atggcctacg ttcagaggca agccgactca aagcagtatg gagataaaat

catagaggag ctgcaagatc	taggccccca	agtgtggagt	gagaccaagt	ctggggtggc	960
accccaaaag atggcaggtg	cgagcccgac	caaggatgac	agtaaggact	cagatttctg	1020
gaagatgctt aatgagccag	aggaccaggc	cccaggaggg	gaggaggtgc	cggctgagga	1080
gcaggaccca agccctgagg	cagcagattc	agcttctggt	gctcccaatg	attttcagaa	1140
caacgtgcag gtcaaagtca	ttcgaagccc	tgcggatttg	attcgattca	tagaggagct	1200
gaaaggtgga acaaaaaagg	ggaagccaaa	tataggccaa	gagcagcctg	tggatgatgc	1260
tgcagaagtc cctcagaggg	aaccagagaa	ggaaaggggt	gatccagaac	ggcagagaga	1320
gatggaagaa gaggaggatg	aggatgagga	tgaggatgaa	gatgaggatg	aacggcagtt	1380
actgggagaa tttgagaagg	aactggaagg	gatectgett	ccgtcagacc	gagaccggct	1440
ccgttcggag gtgaaggctg	gcatggagcg	ggaactggag	aacatcatcc	aggagacaga	1500
gaaagagctg gacccagatg	ggctgaagaa	ggagtcagag	cgggatcggg	caatgctggc	1560
tctcacatcc actctcaaca	aactcatcaa	aagactggag	gaaaaacaga	gtccagagct	1620
ggtgaagaag cacaagaaaa	agagggttgt	ccccaaaaag	cctccccat	caccccaacc	1680
tacagaggag gatcctgagc	acagagtccg	ggtccgggtc	accaagctcc	gtctcggagg	1740
ccctaatcag gatctgactg	tcctcgagat	gaaacgggaa	aacccacagc	tgaaacaaat	1800
cgaggggctg gtgaaggagc	tgctggagag	ggagggactc	acagctgcag	ggaaaattga	1860
gatcaaaatt gtccgcccat	gggctgaagg	gactgaagag	ggtgcacgtt	ggctgactga	1920
tgaggacacg agaaacctca	aggagatctt	cttcaatatc	ttggtgccgg	gagctgaaga	1980
ggcccagaag gaacgccagc	ggcagaaaga	gctggagagc	aattaccgcc	gggtgtgggg	2040
ctctccaggt ggggagggca	caggggacct	ggacgaattt	gacttctgag	accaacacta	2100
cacttgaccc ttcacggaat	ccagactctt	cctggactgg	cttgcctcct	ccccacctcc	2160
ccaccctgga acccctgagg	gccaaacagc	agagtggagc	tgagctgtgg	acctctcggg	2220
caactctgtg ggtgtggggg	ccctgggtga	atgctgctgc	ccctgctggc	agccaccttg	2280
agaceteace gggeetgtga	tatttgctct	cctgaactct	cactcaatcc	tcttcctctc	2340
ctctgtggct tttcctgtta	ttgtccccta	atgataggat	attccctgct	gcctacctgg	2400
agattcagta ggatcttttg	agtggaggtg	ggtagagaga	gcaaggaggg	caggacactt	2460
agcaggcact gagcaagcag	geeceeacet	gcccttagtg	atgtttggag	tcgttttacc	2520
ctcttctatt gaattgcctt	gggatttcct	tctccctttc	cctgcccacc	ctgtccccta	2580
caatttgtgc ttctgagttg	aggagccttc	acctctgttg	ctgaggaaat	ggtagaatgc	2640

tgcctatcac ctccagcaca	atcccagcga	aaaaggtgtg	aagcacccac	catgttcttg	2700
aacaatcagg tttctaaata	aacaactgga	ccatca			2736
<210> 33 <211> 859 <212> DNA <213> homo sapiens					
<400> 33	hh h		h. h. h. h. a. h. a.		60
ggtgtacagc aagctgtgat	tcttgggaaa	actaaaaaag	ttttctggga	caacggggcc	60
ccagagtgat ggcagacaat	gtcagccact	aacaacatag	cccaggcccg	gaagctggtg	120
gaacagctac gcatagaagc	cgggattgag	cgcatcaagg	tctccaaagc	ggcgtctgac	180
ctcatgagct actgtgagca	acatgctcgg	aacgaccccc	tgctggtcgg	agtccctgcc	240
tcggagaacc cctttaagga	caagaaacct	tgtattattt	tataactgtg	ttctcatatg	300
ttctctctc ctctcttct	ttctctctct	ctctctgtct	ctgtctctgt	ctcaggcagg	360
gcatcattca gtaattagct	caaacaaaac	atctcaagtc	cccaaaacct	ttaattccaa	420
aagaaatccc ccctctaccc	cgccaaaaaa	ggcgttccca	ccgcccggat	ggggtagaat	480
ggaccttgta ggtggagatg	aattttcagg	teegaeeeea	tggccttctc	agtttgggcc	540
aaaagggatg gaggctttac	ggccacttcc	cgttcggaat	aactgaaatc	cccagcgatg	600
gggtaacaat tttttaaaac	tctcgattgc	cgtttcaatt	gtggaccggc	gccgaggggg	660
aaagggaggt gacttcgccc	ggtggcaata	gttccgggag	aattggccat	tggtaaaaag	720
acttcatagg gtcactggaa	tgctttgtgt	tgtttttaag	tagaggtaaa	attgagatgg	780
ggggcgggag gtgacatcat	gaagttttt	ggaaatatct	ctttatttaa	aaaattgtta	840
ctccatacgg ctaaaaaag					859
<210> 34 <211> 1838 <212> DNA <213> homo sapiens					
<400> 34 ggeggggtgg geagggttet	accacgtgta	ggataatcat	tcattggtgt	gtccaaaaat	60
ggggtetget eetgetaeet	tgacccttcc	ctttcctctg	cttctctcct	catcatcatt	120
cccaacaaca tcctctgcca	tacacaacaa	aacgtaagtt	tcatttgggc	aaaaattgag	180

cctcacaata aacaccctga agacacaact tgacttataa catagtgcac agcaagagct 240

acatecaagt gteetattat	ctgtgattat	tttcttaatg	acaatgtaca	tatgccccca	300	
tccatgttaa ttattatcta	attccattag	ggttcacgtc	ttttctttct	gggacactat	360	
cctactatat ccatatctat	agatttcaat	atagatgatt	gtgccatctt	ctgtagcccc	420	
teegetetae teatteette	caccatctgc	agagatttga	agtttggggc	tatgcatgaa	480	
acccaacact aaattttgca	agtcaagtga	ccaaaaaagg	gggaggcatt	ttgaagatag	540	
aacctctatt ttaaaaagag	aagttcaact	cataaacgtg	attgataggt	ggctgattta	600	
tttaggtttt gtcaagctat	ctatcaaagt	aatggtacag	ttacccatct	actcaaatat	660	
ctgatttatc tcaccatcca	attatctacc	cacctgtctt	cctctctagc	aatctattta	720	
ctgtttatca atctatcaat	gtaattgtct	aacactcctt	tctattctct	ccctactact	780	
cactatcaat tcatccccat	atgaatctct	aaccatattg	tatctctccc	actgtattca	840	
tttatacacc atcagcagac	attggcatct	tcaaaattat	ctttcaactt	ctgtgaaagc	900	
caacgatctc acaggttaac	aaaatacaaa	agcaataccc	tgtgttgtgg	actctttaaa	960	
atctggtatc ctatccaccc	aagggagaca	ctaacagata	ggccaaagta	gcaagctaat	1020	
gatcagtcac tcactattcc	cggaagagcc	tgtgttttct	aaaacacttt	cttgggaagc	1080	
agatcagcct agaaaagttt	tgattagcac	tgtggttttc	cttttgcact	tgaaggacaa	1140	
aggtgccagc ctttatgctt	ctctcaaccc	ttcaagaaag	tacatgtcag	gaacctatgg	1200	
ctggctttcc ttagcagcaa	gaacttgaga	gaaaaacaca	tctgtctctg	caatgcaaag	1260	
tgaagagtcc acccgcctga	gtgggatgac					